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document article opening Understanding dwarf galaxies as galactic building blocks Monica Tosi Monica Tosi Dwarf galaxies as building blocks INAF – Osservatorio Astronomico di Bologna

abstract This is a summary of a general discussion held during the third EuroConference on galaxy evolution. Various observational features of the stellar populations in present-day dwarf galaxies were presented to introduce the discussion on the possibility that these systems be the main building blocks of spiral and elliptical galaxies. Many people in the audience turned out to think that the inconsistencies among the observed properties of large and dwarf galaxies are too many to believe that the former are built up only by means of successive accretions of the latter. However, theorists of hierarchical galaxy formation suggested that present-day dwarfs are not representative of the galactic building blocks, which may be completely invisible nowadays. Some of them suggested that, contrary to what is usually assumed in hierarchical modelling, the actual building blocks were still fully gaseous systems when their major mergers occurred. If this is the case, then most of the inconsistencies can be overcome, and the scenario of hierarchical galaxy formation becomes not too different from that of a slow gas accretion.